

Reconsideration of the application in view of the following remarks is respectfully requested.

REMARKS

In the Office Action, claims 1-25 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-46 of the patent to Stirton (U.S. Patent No. 6,479,200 B1). Applicants respectfully traverse the Examiner's rejection.

As the Examiner well knows, in the context of an obviousness-type double patenting rejection, it is the claims of the previously issued patent and the claims pending in the application that must be compared. In the Office Action, the Examiner stated that "the instant application and claims 1-46 of the [Stirton] patent are both directed to a method of optical characterization comprising identical steps." Office Action at p. 2 (emphasis added). As an initial matter, it is respectfully submitted that the Examiner's statement in the Office Action is incorrect. As the Examiner well knows, it is the entirety of the claims that must be considered in the context of an obviousness analysis. It is improper to look at isolated elements or limitations. The test boils down, as set forth above, whether, for example, the invention defined by the entirety of claim 1 of the pending application would have been obvious to one skilled in the art based upon any of claims 1-46 of the Stirton patent. Applicants respectfully submit that a fair reading of the claims of the present application and the Stirton patent lead to the inescapable conclusion that the inventions defined by the claims in the pending application are not obvious in view of the inventions defined by the claims of the Stirton patent.

In general, the Stirton patent is directed to several inventions that use scatterometric techniques to control stepper exposure processes on a layer of photoresist. Some of the

independent claims in Stirton, *e.g.*, claims 1 and 7, involve providing a library of optical characteristic traces comprised of photoresist features having a known profile, forming at least one grating structure in a layer of photoresist when the features in the grating structure have an unknown profile, measuring light reflected off of the formed grating structure, and comparing the generated optical characteristic trace to at least one trace in the library. Thereafter, the methods involve modifying at least one parameter of a stepper exposure process based upon the comparisons of these traces. Other independent claims, *e.g.*, claims 14 and 24, involve comparing a measured trace to a target optical characteristic trace. However, in all cases, the claims involve modifying at least one parameter of an exposure process to be performed on at least one subsequently processed wafer based upon the comparison of the various traces. The undersigned urges the Examiner to consult each of the claims in Stirton for the exact wording and limitations of each claim.

As a very broad statement, all of the claims in the Stirton patent are directed to methods of controlling or adjusting exposure processes based upon various measurements of features of grating structures formed in a layer of photoresist. In contrast, the claims of the pending application are directed to using scatterometric techniques to analyze gate stacks based upon desired electrical performance characteristics of such gate stacks. In some cases, *e.g.*, claim 10, the method comprises adjusting at least one parameter of at least one process used to form a gate stack on a subsequently processed substrate based upon the comparison of a generated trace and a target trace. Again, the undersigned encourages the Examiner to look at all of the limitations in each and every claim of the pending application for purposes of determining whether the obviousness-type double patenting rejection should be withdrawn.

Based on the foregoing, it is respectfully submitted that the obviousness-type double patenting rejection is improper. The patent to Stirton is simply not directed to the inventive methods defined by the pending claims. As set forth above, the Stirton patent generally deals with various methods relating to controlling, adjusting or modifying stepper exposure processes based upon scatterometric analysis of features formed in a layer of photoresist. In contrast, the claims of the present application are directed to scatterometric analysis of gate stacks involving consideration of desired electrical performance characteristics. There is simply no suggestion in the claims of Stirton for the inventions defined by the pending claims in the present application.

For at least the aforementioned reasons, it is respectfully submitted that the obviousness-type double patenting rejection issued in the Office Action should be withdrawn and that all pending claims should be allowed to issue. The Examiner is invited to contact the undersigned attorney at (713) 934-4055 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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Date: October 29, 2003

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